IN THE CLAIMS

1. (Currently Amended) A method of adjusting an IMD, comprising:

implanting a lead having an electrode in contact with a sensed medium wherein electrical activity in the sensed medium is sensed by the electrode and representative signals are provided via the lead to the IMD and variations in an electrode-medium interface affect the representative signal;

determining the effectiveness of selected parameters for a sense amplifier located within the IMD to account for variations in the representative signal generated by variations in the electrode-medium interface; and

adjusting the selected parameters.

2. (Currently Amended) A method of adjusting an IMD, comprising:

implanting a lead;

determining the effectiveness of selected parameters for a sense amplifier located within the IMD; and

adjusting the selected parameters, ~~The method of claim 1~~ wherein determining the effectiveness includes performing a Fast Fourier Transform of selected data received within the IMD so that the sense amplifier can be adjusted to only include desired events within a given frequency and gain range.

3. (Original) The method of claim 1 wherein determining the effectiveness includes the use of a wavelet or morphology recognition algorithm on the selected data received within the IMD so that the sense amplifier can be adjusted to only include desired events within a given frequency and gain range.

~~3~~4. (Currently Amended) An IMD comprising:

a housing;

a lead coupled with the housing and having an electrode configured for placement in contact with ~~placed in~~ a tissue substrate having electrical signals that are sensed the electrode with a representative signal provided to the

housing via the lead, wherein a tissue-electrode interface affects the representative signal ; and

a sense amplifier disposed within the housing and configured to process the representative signals obtained from the lead, wherein a bandpass range of the sense amplifier is adjustable based upon variations in the tissue electrode interface.

45. (Currently Amended) A method of adjusting an IMD parameter responsive to a changing environment of a lead placed in a tissue, comprising;

placing the lead in the tissue;

monitoring variability of a selected set of parameters related to a lead-tissue interface and the affect the lead-tissue interface has on signals passed through the lead representative of a given electrical signal within the tissue; and

adjusting the parameters to account for changes in the environment of the lead as the lead-tissue interface varies and affects the signals..

~~5~~6. (Currently Amended) The method of claim ~~4~~5 wherein said environment includes the growth of fibrosis on the lead at the lead-tissue interface.